World Academy of Science, Engineering and Technology
International Journal of Computer and Systems Engineering
Vol:11, No:09, 2017

Human Behavior Modeling in Video Surveillance of Conference Halls

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Abstract : In this paper, we present a human behavior modeling approach in videos scenes. This approach is used to model the normal behaviors in the conference halls. We exploited the Probabilistic Latent Semantic Analysis technique (PLSA), using the 'Bag-of-Terms' paradigm, as a tool for exploring video data to learn the model by grouping similar activities. Our term vocabulary consists of 3D spatio-temporal patch groups assigned by the direction of motion. Our video representation ensures the spatial information, the object trajectory, and the motion. The main importance of this approach is that it can be adapted to detect abnormal behaviors in order to ensure and enhance human security.

Keywords : activity modeling, clustering, PLSA, video representation
Conference Title : ICPRIP 2017 : International Conference on Pattern Recognition and Image Processing
Conference Location : Zurich, Switzerland
Conference Dates : September 15-16, 2017